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REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the comments set forth fully below. Claims 1-52 were pending. Claims 53-58 were previously canceled. Within the Office Action, claims 1, 2, and 4-13 have been rejected under 35 U.S.C. § 101; claims 17-22 and 43-45 have been rejected under 35 U.S.C. § 112, second paragraph; claims 1-3, 26, and 48 have been rejected under 35 U.S.C. § 102(b); claims 4-15, 17-25, 27-39, 41, 43-47, and 49-52 have been rejected under 35 U.S.C. § 103(a); and claims 16 and 40 have been objected to. By way of the amendments made above, claims 1-26, 33, 36, 40, 41, 45, 47, 48, and 51 have been amended, claim 46 has been canceled and new claims 59-71 have been added. Accordingly, claims 1-45, 47-52 and 59-71 are pending.

The Applicants' attorney would like to thank Examiner Sandoval and Examiner Baron for their time and courteousness during the personal interview on September 18, 2007. During this interview the above amendments to the claims were discussed in light of the teachings of Marino.

Rejections under 35 U.S.C. § 101

Within the Office Action, claims 1, 2, and 4-13 have been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Specifically, it is stated that claims 1, 2, and 4-13 recite non-statutory computer program product and code.

In response to the rejection, claim 1 has been amended so that it now reads, "A computer system comprising a *memory portion* configured to store data and an operating system" (*italics added*). Accordingly, claim 1 and its dependent claims are directed to statutory subject matter. The preambles of claims 2 and 4-13 have also been amended so that they too are directed to a computer system. The Applicants respectfully submit that claims 1, 2 and 4-13 are directed to statutory subject matter.

Rejections under 35 U.S.C. § 112, ¶ 2

Within the Office Action, claims 17-22 and 43-45 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

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Claim 17

Within the Office Action, it is stated that there is insufficient basis in claim 17 for the limitation "encrypted file names."

Claim 16, from which claim 17 depends, has been amended to specify "... to encrypt the file name with the encrypted file name key to generate an encrypted file name." Accordingly, the term "encrypted file names" in claim 17 has an antecedent basis in claim 16.

Claims 17-22 and 43-45

Within the Office Action, it is stated that claims 17-22 and 43-45 improperly recite a secondary device. (The Applicants presume that this rejection is not directed to claim 17 inasmuch as claim 17 does not recite the term "secondary device.") It is stated that "[t]here is insufficient antecedent basis for this limitation in the claim since a dependent claim inherits the terms from the claim it depends on directly, *not two or three claims removed*" (italics added). The term "secondary device" is introduced in the independent claim 1, from which the claims 17-22 depend, and in the claim 42, from the claims 43-45 depend. Accordingly, there is proper antecedent basis for the term "secondary device."

Claims 22 and 45

Within the Office Action, claim 22 is rejected because it recites "wherein the secondary device is a socket connection," and claim 45 is rejected because it recites "wherein the secondary device comprises a communication channel." It is stated within the Office Action that "[n]either a socket connection nor a communication channel is a device." Based on the amendments made above, these rejections are now moot.

First, claim 22 has been amended to recite, "the secondary device comprises an interface port comprising a socket connection." Those skilled in the art recognize that a device can include an interface port and a socket connection for communicating with other devices over a network. Accordingly, the rejection of claim 22 is moot.

Second, claim 45 has been amended to recite "the secondary device forms part of a network of devices." The rejection of claim 45 is also now moot.

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Rejections under 35 U.S.C. § 102(b)

Claims 1-3, 26, and 48

Within the Office Action, claims 1-3, 26, and 48 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,029,206 to Marino et al. ("Marino")

Marino is directed to a "security kernel of a secure processing system for providing security management, key management and kernel security functions." [Marino, Abstract] The security kernel disclosed in Marino performs high-level functions such as using an application-layer protocol to generate traffic encryption keys [Marino, col. 4, lines 35-38], parsing, building, and sending messages [Marino, col. 4, lines 57-62 and 65-67], and providing negotiations to allow the determination of security attributes associated with a particular traffic encryption key [Marino, col. 5, lines 3-6]. The term "kernel," as used in Marino, indicates that Marino's "kernel system" is a central or essential part of its security system. Marino uses the term "kernel" differently than "kernel" is used in the present invention.

In contrast to the teachings of Marino, the encrypting operating system of the present invention encrypts the data, directory and directory information. The claims have been amended to add the limitation of an encrypted directory. This added limitation finds support throughout the application as filed, such as at page 26, lines 26-27; page 36, lines 3-4; page 49, lines 9-12 and 19-20; page 50, lines 4-5; page 56, lines 6-7. As described within the specification, the encrypted directory file contains file names and a corresponding i-node entry. [Present Specification, page 48, line 20 - page 49, line 14] Marino does not teach an operating system kernel configured to encrypt and decrypt data. Further, Marino does not teach an encrypted directory file and encrypted directory information.

Claim 1 is directed to a computer system comprising a memory portion configured to store data and an operating system. The operating system of claim 1 comprises a kernel configured to encrypt and decrypt the data accessed using an encrypted directory and transferred between the memory portion and a secondary device. As discussed above, Marino does not teach an operating system kernel configured to encrypt and decrypt data. Furthermore, Marino does not teach using an encrypted directory. For at least these reasons, the independent claim 1 is allowable over Marino.

Claims 2 and 3 are both dependent on the independent claim 1. As described above, the independent claim 1 is allowable over Marino. Accordingly, claims 2 and 3 are both also allowable as depending on an allowable base claim.

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Claim 26 is directed to a computer system comprising a first device coupled to a second device. The first device has an operating system kernel and a directory structure for accessing data, the operating system kernel configured to encrypt clear data using an encryption key to generate cipher data, the first device further configured to decrypt the cipher data using the encryption key to generate the clear data, wherein the directory structure and corresponding directory information are encrypted. The second device is configured to exchange cipher data with the first device. As discussed above, Marino does not teach an operating system kernel configured to encrypt and decrypt data. Further, as described above, Marino does not teach that a directory and corresponding directory information are encrypted. For at least these reasons, the independent claim 26 is allowable over Marino.

Claim 48 is directed to a computer system. The computer system of claim 48 comprises a processor, a physical memory, a secondary device coupled to the physical memory, and an operating system comprising a kernel. The physical memory includes an encrypted directory and corresponding directory information for accessing data files. The kernel is configured to access the data files using the encrypted directory and to encrypt and decrypt data transferred between the physical memory and the secondary device. As discussed above, Marino does not disclose an operating system kernel configured to access the data files through an encrypted directory. Further, as described above, Marino does not teach an encrypted directory and corresponding directory information. For at least these reasons, the independent claim 48 is allowable over Marino.

Rejections under 35 U.S.C. § 103(a)

Claims 4-7, 9, 11, 14, 15, 17, 18, 27-29, 36-39, 41, and 49-51

Within the Office Action, claims 4-7, 9, 11, 14, 15, 17, 18, 27-29, 36-39, 41, and 49-51 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marino in view of U.S. Patent Pub. No. 2003/0005300 to Noble et al. ("Noble")

Noble is directed to using a token that contains keys used to decrypt data when the token is within a predetermined range of a laptop and to encrypt data when outside that range. [Noble, Abstract] Noble does not teach using an encrypted directory. As discussed above, Marino does not teach an encrypted directory. Accordingly, neither Marino, Noble nor their combination teach using an encrypted directory.

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Claims 4-7, 9, 11, 14, 15, 17, and 18 are all dependent on the independent claim 1. As described above, the independent claim 1 is allowable over Marino. Accordingly, claims 4-7, 9, 11, 14, 15, 17, and 18 are all also allowable as depending on an allowable base claim.

Claims 27-29 are all dependent on the independent claim 26. As described above, the independent claim 26 is allowable over Marino. Accordingly, claims 27-29 are all also allowable as depending on an allowable base claim.

The independent claim 36 is directed to a method of encrypting data. The method of claim 36 comprises receiving clear data, and executing kernel code in an operating system, the kernel code configured to access data using an encrypted directory and using a symmetric key to encrypt the clear data to generate cipher data, the kernel code further using the symmetric key to decrypt the cipher data to generate the clear data. As described above, neither Marino, Noble nor their combination teach using an encrypted directory. For at least these reasons, the independent claim 36 is allowable over Marino, Noble and their combination.

Claims 37-39 and 41 are all dependent on the independent claim 36. As described above, the independent claim 36 is allowable over Marino, Noble and their combination. Accordingly, claims 37-39 and 41 are all also allowable as depending on an allowable base claim.

Claims 49-51 are all dependent on the independent claim 48. As described above, the independent claim 48 is allowable over Marino. Accordingly, claims 49-51 are all also allowable as depending on an allowable base claim.

Claims 8, 10, and 30

Within the Office Action, claims 8, 10, and 30 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marino and Noble in view of U.S. Patent No. 5,903,881 to Schrader et al. ("Schrader")

Marino and Noble have been characterized above. Schrader is directed to a system and method of providing an integrated user interface used for integrating various tasks separately associated with personal finance software and with online banking products. [Schrader, Abstract] Like Marino and Noble, Schrader also does not disclose using an encrypted directory.

Claims 8 and 10 are both dependent on the independent claim 1. Claim 30 is dependent on the independent claim 26. As described above, the independent claims 1 and 26 are both allowable over Marino. Accordingly, claims 8, 10, and 30 are all also allowable as depending on allowable base claims.

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Claims 12, 13, and 52

Within the Office Action, claims 12, 13, and 52 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marino and Noble, and further in view of U.S. Patent No. 5,727,206 to Fish et al. ("Fish")

Marino and Noble have been characterized above. Fish is directed to a method of identifying and repairing file system damage following the failure of a processing node within a clustered UNIX file system. [Fish, Abstract] Like Marino and Noble, Fish also does not disclose using an encrypted directory. Claims 12 and 13 are both dependent on the independent claim 1. Claim 52 is dependent on the independent claim 48. As described above, the independent claims 1 and 48 are both allowable over Marino. Accordingly, claims 12, 13, and 52 are all also allowable as depending on allowable base claims.

Claims 19, 21, 32, and 44

Within the Office Action, claims 19, 21, 32, and 44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marino and Noble, and further in view of U.S. Patent No. 6,836,888 to Basu et al. ("Basu")

Marino and Noble have been characterized above. Basu is directed to a reverse sandbox that extends a private computing environment onto a standalone host in a public environment. [Basu, Abstract] Like Marino and Noble, Basu also does not disclose using an encrypted directory. Claims 19 and 21 are both dependent on the independent claim 1. Claim 32 is dependent on the independent claim 26. Claim 44 is dependent on the independent claim 36. As described above, the independent claims 1 and 26 are both allowable over Marino and the independent claim 36 is allowable over Marino and Noble. Accordingly, claims 19, 21, 32, and 44 are all also allowable as depending on allowable base claims.

Claims 20, 31, and 43

Within the Office Action, claims 20, 31, and 43 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marino and Noble, and further in view of U.S. Patent No. 5,729,710 to Magee et al. ("Magee")

Marino and Noble have been characterized above. Magee is directed to a memory management method for microkernel architecture. [Magee, Abstract] Like Marino and Noble, Magee also does not disclose using an encrypted directory. Claim 20 is dependent on the independent claim 1. Claim 31 is dependent on the independent claim 26. Claim 43 is

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dependent on the independent claim 36. As described above, the independent claims 1 and 26 are both allowable over Marino and the independent claim 36 is allowable over Marino and Noble. Accordingly, claims 20, 31, and 43 are all also allowable as depending on allowable base claims.

Claims 22-24, 33-35, and 45-47

Within the Office Action, claims 22-24, 33-35, and 45-47 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marino and Noble, and further in view of U.S. Patent No. 6,477,545 to LaRue. ("LaRue")

Marino and Noble have been characterized above. LaRue is directed to a method of synchronizing databases. [LaRue, Abstract] Like Marino and Noble, LaRue also does not disclose using an encrypted directory. Claims 22-24 are all dependent on the independent claim 1. Claims 33-35 are all dependent on the independent claim 26. Claims 45 and 47 are both dependent on the independent claim 36. As described above, the independent claims 1 and 26 are both allowable over Marino and the independent claim 36 is allowable over Marino and Noble. Accordingly, claims 22-24, 33-35, 45 and 47 are all also allowable as depending on allowable base claims. Claim 46 has been canceled by the above amendment.

Claim 25

Within the Office Action, claim 25 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marino and Noble, and further in view of U.S. Patent Pub. No. 2002/0065876 to Chien et al. ("Chien")

Marino and Noble have been characterized above. Chien is directed to securing a computer system that forms part of a distributed processing system. Applications are downloaded to and run on the computer system. The applications and the native computer systems and associated data are protected from one another. In paragraph 0238, Chien discusses encrypted directories. Chien uses the term to describe a directory that contains encrypted file names. Chien does not use the term, or describe, encrypting a directory itself, which includes encrypting directory information such as the location of files. In short, Chien does not disclose using an encrypted directory, as claimed in the present claims. As explained above, neither Marino nor Noble discloses this element either. Claim 25 is dependent on the independent claim 1. As described above, the independent claim 1 is allowable over Marino. Accordingly, claim 25 is also allowable as depending on an allowable base claim.

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Allowable Subject Matter

Within the Office Action, it is stated that claims 16 and 40 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

The new independent claim 70 includes the limitations of claim 16, its base claim (original claim 1), and all the intervening claims. Accordingly, claim 70 is allowable.

The new independent claim 71 includes the limitations of claim 40 and of the only claim from which it depends, the original claim 36. Accordingly, 71 is allowable.

New claims 59-69 are all allowable

The new claims 59-69 are all allowable. None of these claims adds new matter.

The new claims 59-62 are all dependent on the independent claim 1 and, accordingly, are also allowable as depending on an allowable base claim. The new claims 63-65 are all dependent on the independent claim 26 and, accordingly, are also allowable as depending on an allowable base claim. The new claims 66 and 67 are both dependent on the independent claim 36 and, accordingly, are also allowable as depending on an allowable base claim. The new claims 68 and 69 are both dependent on the independent claim 48 and, accordingly, are also allowable as depending on an allowable base claim.

CONCLUSION

For the reasons given above, the Applicants respectfully submit that claims 1-45, 47-52 and 59-71 are in condition for allowance, and allowance at an early date would be appreciated. If the Examiner has any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 so that any outstanding issues can be quickly and efficiently resolved.

Respectfully submitted,
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